# 02750 - SEWER LINE CLEANING

(Revised 11/08/06)

## SELECTED LINKS TO SECTIONS WITHIN THIS SPECIFICATION

 PART 1 - GENERAL
 ROOT & MATERIAL
 CLEANING PRECAUTIONS

 PART 2 - PRODUCTS
 REMOVAL
 CLEANING WATER DISPOSAL

 PART 3 - EXECUTION
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# **PART 1 – GENERAL**

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Requirements and Supplementary Conditions applicable to this specification.
- B. Section 01000 GENERAL REQUIREMENTS
- C. Section 02760 TELEVISION INSPECTION OF SEWER LINES
- D. Section 02770 SEWER FLOW CONTROL
- E. Section 02780 LINER FOR SEWER REHABILITATION

## 1.2 SUMMARY

This section includes all the equipment, labor, and materials necessary to perform all work for sewer line cleaning.

# 1.3 SUBMITTALS

Submit written description of cleaning procedure and all equipment to be used.

## 1.4 QUALITY ASSURANCE

- A. Comply with all codes, laws, ordinances, and regulations of governmental authorities having jurisdiction over this part of the work.
- B. The Contractor shall comply with the latest revision of the Virginia Occupational Safety and Health Standards for the Construction Industry as adopted by the Safety and Health Codes Commission of Virginia.
- C. The Contractor shall comply with Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation, "Virginia Erosion and Sedimentation Control Handbook," latest revision.
- D. The sewer line cleaning shall remove foreign materials from the lines and restore the sewer to a minimum of 95 percent of the original carrying capacity or as required for proper seating of an internal pipe liner. It is recognized that there are some conditions such as broken pipe and major blockages that prevent cleaning from being accomplished or where additional damage would result if cleaning were

attempted or continued. Should such conditions be encountered, the contractor will not be required to clean those specific sections. If in the course of normal cleaning operations, damage does result from pre-existing and unforeseen conditions such as broken pipe, the contractor will not be held responsible.

#### 1.5 COORDINATION

- A. The contractor shall completely remove and dispose of all dirt, debris, rubbish and surplus, and unsuitable materials at the end of each work day at no additional cost to the owner.
- B. Whenever the contractor desires to use a hydrant for water supply, the contractor shall obtain the permission of the owner. All costs associated with the use of water supplied from hydrants shall not be paid for separately but shall be deemed to be included in the bid. Operation of hydrant shall be in accordance with the City Of Lynchburg Backflow Prevention Program. Use of an RPZ device or air gap is required.

# PART 2 - PRODUCTS

# 2.1 HIGH-VELOCITY JET (HYDRO CLEANING) EQUIPMENT

All high-velocity sewer cleaning equipment shall be constructed for ease and safety of operation. The equipment shall have a selection of two or more high-velocity nozzles. The nozzles shall be capable of producing a scouring action from 15 to 45 degrees in all size lines designated to be cleaned. Equipment shall also include a high-velocity gun for washing and scouring manhole walls and floor. The gun shall be capable of producing flows from a fine spray to a solid stream. The equipment shall carry its own water tank, auxiliary engines, pumps, and hydraulically driven hose reel.

# PART 3 - EXECUTION

#### 3.1 CLEANING PRECAUTIONS

During sewer cleaning operations, satisfactory precautions shall be taken in the use of cleaning equipment to insure that the water pressure created does not damage or cause flooding of property or buildings being served by the sewer.

## 3.2 SEWER LINE CLEANING

The designated sewer sections shall be cleaned using high-velocity jet equipment. The equipment shall be capable of removing dirt, grease, rocks, sand, and other materials and obstructions from the sewer lines and manholes. If cleaning of an entire section cannot be successfully performed from one manhole, the equipment shall be set up on the other manhole and cleaning again attempted. If, again, successful cleaning cannot be performed or the equipment fails to traverse the entire section, it will be assumed that a major blockage exists and the cleaning effort shall be abandoned.

## 3.3 ROOT REMOVAL

Roots shall be removed in the sections where root intrusion is a problem. Special attention should be used during the cleaning operation to assure almost complete removal of roots from the joints. Roots which could prevent installation of a pipe liner shall be removed. Procedures may include the use of mechanical equipment such as rodding machines, bucket machines, and winches using root cutters and porcupines, and equipment such as high-velocity jet cleaners.

## 3.4 MATERIAL REMOVAL

Sludge, dirt, sand, rocks, grease, and other solid or semisolid material resulting from the cleaning operation shall be captured and removed at the downstream manhole of the section being cleaned, loaded in a suitable container, transported to the nearest wastewater treatment facility, and disposed of at that facility in accordance with all requirements and charges.

## 3.5 CLEANING WATER DISPOSAL

Water used to clean the sewer lines shall be discharged into the sanitary sewer downstream of the cleaning operation. Under no circumstances shall the contractor discharge water used to clean sewer lines onto the ground or into streams.

## 3.6 FINAL ACCEPTANCE

Acceptance of sewer line cleaning shall be made upon the successful completion of the television inspection and shall be to the satisfaction of the engineer. If television inspection shows the cleaning to be unsatisfactory, the contractor shall be required to reclean and re-inspect the sewer line until the cleaning is shown to be satisfactory.

END OF SECTION 02750

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